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ABSTRACT

An undulated-wall honeycomb structure (1) has multiple cell passages (2) with mutually parallel passage directions. With this undulated-wall honeycomb structure (1), intersections (4) between walls (3) partitioning the cell passages (2) are formed at cross-sections perpendicular to the cell passages (2) and positioned systematically maintaining a predetermined pitch, and also the wall face portions (5) of the walls (3) excluding the intersections (4) are formed with undulated shapes in both the cell passage direction and the cross-section direction perpendicular to the cell passage direction. According to this undulated-wall honeycomb structure, advantages such as improved exhaust gas purification capabilities and catalyst capabilities, improved mechanical strength for canning, and further improved heat-resistant shock properties can be obtained.